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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/589,508

08/15/2006

Tatsuo Makii

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EXAMINER

TEJANO, DWIGHT ALEX C

ART UNIT

PAPER NUMBER

4112

MAIL DATE

DELIVERY MODE

02/03/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/589,508	Applicant(s) MAKII, TATSUO	
	Examiner Dwight Alex C. Tejano	Art Unit 4112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>15 Aug 2006, 03 May 2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakashima (US 6,473,567.)

Regarding **claim 1**, Nakashima discloses a lens barrel assembly having a movable lens. More specifically, Nakashima discloses a movable lens (5, 6, 25, 26) disposed in a lens barrel (8, 28) for movement along an optical axis (O), an actuating mechanism for moving said movable lens, and a control means for controlling the actuating mechanism.

Furthermore, Nakashima explicitly discloses an actuating mechanism that has:

- an externally threaded member extending parallel to optical axis (“shaft member,” 10a, 30a)
- a motor for rotating externally threaded member (“motor,” 10, 30)

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- an internally threaded member nonrotatably threaded over externally threaded member for movement into abutment against the movable lens in response to a rotation of the externally threaded member (“rack,” 11, 31)
- an urging means for urging the movable lens in the longitudinal direction of the externally threaded member to move into abutment against the internally threaded member (“rack spring,” 12, 32)

Additionally, Nakashima expressly discloses the lens barrel assembly as further comprising a position detecting means for detecting a position of the movable lens along the optical axis and generating positional data corresponding to the detected data (“position detector,” 13, 33.)

Nakashima discloses a first controller that controls the angular displacement of the motor in order to move the lens to the target position. Nakashima teaches that the control circuit is driven by the motor, which moves the movable lens frame along the optical axis direction (c. 3, ln. 37 – 45.)

Finally, Nakashima inherently discloses a second controller for judging that the movable lens is forcibly stopper against movement and immediately de-energizes the motor if the positional data remains unchanged for a set time. Nakashima states that “when the movable lens ceases to move in the optical axis direction, ... the movable lens frame is considered to have abutted on the lens frame.” When this happens, “the motor ... bring[s] the movable lens frame 8 to a stop...” (c. 4, ln. 33 – 52.) Even though a second controller is not expressly stated, the function performed by the second

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controller is clearly disclosed. As such, the second controller is considered inherently disclosed by Nakashima.

As to **claim 2**, Nakashima inherently discloses the limitation of the movable lens being nonrotatable about the optical axis, as the movable lens is set within a lens frame (Fig. 1, Fig. 4.) Because the structure as presented would render it impossible to rotate the lens about the optical axis, the property is considered inherently disclosed by Nakashima. The remaining limitations of the claim are reproductions of the limitations of claim 1. Those limitations are, therefore, interpreted and rejected for the same reasons as presented in claim 1.

As to **claim 3**, Nakashima meets all of the limitations present in claims 1 and 2, as discussed above. Furthermore, Nakashima discloses the establishment of positional data when said motor is de-energized as a reference position for a distance over which said movable lens is to move along the optical axis (c. 4, ln. 41 – 45.)

As to **claim 4**, Nakashima meets all of the limitations present in claims 1 and 2, as shown above. Furthermore, Nakashima discloses a guiding mechanism disposed in the lens barrel for guiding the movable lens along the optical axis ("movable lens frame," 8, 28), a guide shaft (3, 4, 23, 24) extending along the optical axis, and a helical spring (interpreted as "coil spring") coiled around the guide shaft resiliently held against the bearing and the barrel (32.)

Claims 5 and 6 are inherent apparatus variations of the claims listed above. They are thus interpreted and rejected for the same reasons as presented previously.

Citation of Pertinent Art

The prior art made of record is considered pertinent to the applicant's disclosure, but is not relied upon as a reference for the preceding sections:

- Araoka, et al. (US 6434331 B1) discloses a lens barrel and camera frame.
- Nomura, et al. (US 6160962 A) discloses a camera with lens barrier apparatus.
- Abe, et al. (US 20030107667 A1) discloses a camera and optical finder.
- Tamura (US 5842055 A) discloses a lens barrel comprising a lens moving in an optical axis.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwight Alex C. Tejano whose telephone number is (571) 270-7200. The examiner can normally be reached on Monday through Friday 9:30-6:00 with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jefferey F. Harold can be reached on (571) 272-7519. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dwight Alex C Tezano
Examiner
Art Unit 4112

/Dwight Alex C Tezano/
Examiner, Art Unit 4112
/Jefferey F Harold/
Supervisory Patent Examiner, Art Unit 4112